National Sea Grant College Program

Science serving America's coasts

What Does the National Sea Grant College Program Do for the Nation?

Oregon Sea Grant's Scientist and Fishermen Exchange brings researchers and fishermen together . (Photo: Oregon Sea Grant)

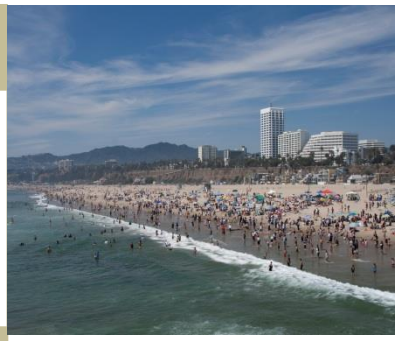
NOAA's National Sea Grant College Program enhances the practical use and conservation of coastal, marine, and Great Lakes resources to create a sustainable economy and environment. Sea Grant is a national network of 33 university-based programs dedicated to serving citizens in coastal communities throughout the Nation. Sea Grant helps citizens understand, conserve, and better utilize America's coastal, ocean, and Great Lakes resources.

With on-the-ground extension experts located in every coastal and Great Lakes state, Sea Grant translates sound scientific information into tools, products and services that benefit coastal residents and their communities every day. Sea Grant makes an impact at local, regional, and national levels by drawing on the experience of more than 3,000 scientists, engineers, public outreach experts, educators, and students from more than 300 institutions.

Recent Accomplishments

Sustainable Coastal Development: Sea Grant low-impact development ordinance endorsed by Los Angeles mayor

Sea Grant's work is helping coastal communities make efficient use of land, energy and water resources and protect the resources needed to sustain coastal ecosystems and quality of life. University of Southern California Sea Grant worked with the former Public Works Commissioner and the Bureau of Sanitation to develop a low-impact development ordinance designed to balance multiple uses and optimize environmental stability. The ordinance was endorsed by the Los Angeles City Council and signed by the Mayor.



Aerial view of Santa Monica Beach, Los Angeles, CA. (Photo: USC Sea Grant)

Healthy Coastal Ecosystems: Sea Grant identifies and develops a marketable, salt-tolerant crop with biofuel potential

Sea level rise is costing coastal farmers through crop and land loss due to flooding and increasing salinity of farmland. Projections used by the state of Delaware predict a one meter rise in sea level over the next 100 years, which would cause 11,000 acres of prime farmland in the state to be lost, estimated at $23,309,000 annually. Delaware Sea Grant funded research into the identification and cultivation of seashore mallow to provide farmers with a marketable alternative to current salt-intolerant crops. Biofuels can be engineered from oils extracted from seashore mallow seeds, hay baled from the plant stems, and, the mallow may help protect coastal marshes as waters rise.

Seashore mallow has potential as a biofuel and as a viable crop on farmland exposed to salt water. (Photo: Delaware Sea Grant)

Safe and Sustainable Seafood Supply: Sea Grant scientist's groundbreaking spawning method earns patent

Sea Grant's research and technical expertise have helped bolster "buy-local" food production and created a market throughout much of the country. A Wisconsin Sea Grant scientist was awarded a patent for a yellow perch spawning method that enables the year-round production of perch fingerlings. Sea Grant provided technical expertise to raise yellow perch for the non-profit, Growing Power, which was so successful that it has been adapted into a for-profit called Sweet Water Organics. Last year, the business sold 3,000 yellow perch, which can command more than $16 a pound in the marketplace.

More Accomplishments

Hazard Resilience in Coastal Communities: Lifesaving Sea Grant Mobile Technology Device Aids Rip Current Identification and Benefits the National Weather Service

Rip currents are a highly dangerous and little understood natural phenomenon. In preparation for the summer and in time for "Rip Current Awareness Week" (June 3, 2012), the New Jersey Sea Grant Consortium debuted a mobile device technology to collect and distribute up-to-the-minute rip current data. This smartphone app helps lifeguards identify and catalog rip current occurrences on their own beaches, while giving them a glimpse at what neighboring communities are experiencing in real-time. The application could prove invaluable to both local lifeguards and the National Weather Service (NWS). The NWS plans to use the collected information to evaluate its rip current forecasts. The information will help scientists understand more about when and where rip currents occur, and under what conditions they are most prevalent.

A Network Response: Sea Grant & Hurricane Sandy Sea Grant programs across the country coordinated with Federal and state agencies to provide critical information and support for those who suffered damage to livelihoods and property. (Image credit: New Jersey Sea Grant)

Did You Know?

Sea Grant is working with schools to implement technology-driven aquaculture programs to reinforce concepts in math and sciences, and teach job skills. In Florida, students at Crystal Lake Middle School in Lakeland are raising tilapia and redfish, using the same methods and facilities found in private facilities. Florida Sea Grant has helped more than a dozen middle and high schools implement aquaculture programs. Incorporating aquaculture education into the Crystal Lake curriculum has helped raise grades and turn around the school's reputation as a chronic underachiever. Aquaculture generates an estimated $250 million economic impact annually in the state.

Budget and Staff

The fiscal year 2013 enacted budget for Sea Grant is $57.3M. The current National Sea Grant Office staff consists of 11 full-time equivalent federal workers supported by Sea Grant funds and two full time equivalents supported with funds from other NOAA and other Federal agencies.

What's Next for NOAA's Sea Grant?

Sea Grant will continue to sustain our nation's ocean, coastal and Great Lakes resources through university-based research, communications, education, extension and legal programs. As part of its 2014-2017 national network strategic plan, Sea Grant identified four focus areas:

- Healthy Coastal Ecosystems
- Sustainable Fisheries and Aquaculture
- Resilient Communities and Economies
- Environmental Literacy and Workforce Development

Research Partnerships

The stability of partnerships between NOAA and Sea Grant institutions allows NOAA to address long-term programmatic goals and to develop constituent relationships and local leadership nationwide. Partnerships are the key to achieving Sea Grant's mission. Sea Grant engages in partnerships at all levels—local, state, regional, and national—with partners in academia, government, and the non-profit and private sectors. Sea Grant works closely with other NOAA programs, focusing expanded university efforts on critical coastal and marine issues central to NOAA's current and future needs. Sea Grant also participates in joint initiatives with other federal agencies such as the Environmental Protection Agency, U.S. Department of Agriculture, and the Department of Homeland Security.